Recombinant SPIR2 protein (His tag)

Catalog Number	545562
Synonyms	Spir-2
Species	Human
Expression System	E. coli
Accession	Q8WWL2
Molecular Weight	Predictes a molecular mass of 41.64 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	1-354
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-354 aa (Q8WWL2) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Protein Spire Homolog 2 (Spir-2) Fragment (aa 1-354) is a high-purity, functionally relevant protein designed for studying actin nucleation and cytoskeletal dynamics. This fragment encompasses the complete KIND domain and two WH2 domains, making it an ideal tool for investigating specific molecular interactions in intracellular transport, asymmetric cell division, and DNA damage response mechanisms. Protein Spire Homolog 2 (SPIRE2) is a key actin nucleation factor in human cells that promotes actin filament assembly and remains associated with the slow-growing pointed ends of filaments. It plays critical roles in intracellular vesicle transport by linking actin cytoskeleton dynamics with organelle movement, and is essential for asymmetric spindle positioning and polar body extrusion during female germ cell meiosis. SPIRE2 also functions in the nucleus where it collaborates with SPIRE1 to assemble nuclear actin filaments facilitating chromatin movement and DNA repair processes following damage. The protein localizes to multiple cellular compartments including the cytoskeleton, cytosol, cell membrane, and cytoplasmic vesicle membranes, with specific accumulation at cleavage furrows during asymmetric cell division, highlighting its importance in cellular organization and division mechanisms.